

## CLAIMS:

1. A lasted footwear for enclosing a human foot having a heel, an ankle, and medial and lateral sides, said lasted footwear comprising an outer shell for receiving the heel, the ankle and the medial and lateral sides of the foot, said outer shell comprising a layer of thermoformed foam, said layer of thermoformed foam comprising first and second opposite surfaces, one of said first and second opposite surfaces being heat-treated.
2. A lasted footwear as defined in claim 1, wherein both said first and second opposite surfaces are heat-treated.
3. A lasted footwear as defined in claim 2, wherein said layer of thermoformed foam is a first layer, said outer shell further comprising a second layer formed from fibers selected from the group consisting of carbon, kevlar, nylon, cotton, polycotton, acetate, acrylic and polyester fibers.
4. A lasted footwear as defined in claim 3, wherein said outer shell further comprises a third layer, said third layer being a film of polyurethane applied to said second layer.
5. A lasted footwear as defined in claim 4, wherein said outer shell comprises an inner surface and an outer surface, and wherein said third layer forms part of said outer surface.
6. A lasted footwear as defined in claim 5, wherein said footwear comprises an inner lining having inner and outer surfaces, said inner lining being less rigid than said outer shell, said inner surface being adapted to contact the foot in use and said outer surface being affixed to said first layer of said outer shell.

7. A lasted footwear as defined in claim 6, wherein said inner lining comprises a layer of polyester laminated with a layer of foam.
8. A lasted footwear as defined in claim 7, the foot having a plantar surface,  
5 wherein said footwear comprises an insole for facing the plantar surface of the foot.
9. A lasted footwear as defined in claim 8, wherein said footwear comprises an outsole affixed to said insole.
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10. A lasted skate boot for enclosing a human foot, the foot having a heel, an ankle, medial and lateral sides, a plantar surface and toes, said skate boot comprising an outer shell comprising a heel counter for receiving the heel of the foot, an ankle portion for receiving the ankle and medial and lateral  
15 quarters for receiving the medial and lateral sides of the foot respectively, said outer shell comprising a layer of thermoformed foam, said layer of thermoformed foam comprising first and second opposite surfaces, one of said first and second opposite surfaces being heat-treated.
- 20 11. A lasted skate boot as defined in claim 10, wherein said heel counter, ankle portion and medial and lateral quarters are thermoformed for defining a foot-receiving cavity having a three-dimensional geometry that conforms to the heel, ankle and medial and lateral sides of the foot.
- 25 12. A lasted skate boot as defined in claim 11, wherein both said first and second opposite surfaces of said outer shell are heat-treated.
13. A lasted skate boot as defined in claim 10, wherein the foot has an Achilles tendon with an upper part and a lower part that projects outwardly with  
30 relation to the upper part, the lower part merging with the heel, wherein the ankle has a medial malleolus and a lateral malleolus, and wherein said outer shell is thermoformed in a three dimensional shape such that said heel counter

is substantially cup shaped for following the contour of the heel of the foot, said upper part of said ankle portion is shaped for following the upper part of the Achilles tendon and said lower part of said ankle portion is shaped for following the lower part of the Achilles tendon.

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14. A lasted skate boot as defined in claim 13, wherein both said first and second opposite surfaces of said outer shell are heat-treated.

15. A lasted skate boot as defined in claim 14, wherein said outer shell is thermoformed in a three dimensional shape such that said ankle portion comprises a lateral cup-shaped section for receiving the lateral malleolus and a medial cup-shaped section for receiving the medial malleolus.

16. A lasted skate boot as defined in claim 15 further comprising an insole facing the plantar surface of the foot, one of said outer shell and said insole comprising a portion overlapping the other of said outer shell and said insole.

17. A lasted skate boot as defined in claim 16, wherein said outer shell comprises a lower skirt that is foldable for overlapping said insole.

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18. A lasted skate boot as defined in claim 17, wherein said lower skirt extends along a lower edge of said outer shell.

19. A lasted skate boot as defined in claim 18 further comprising a toe cap for enclosing the toes of the foot.

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20. A lasted skate boot as defined in claim 19, wherein said toe cap is made of molded plastic.

21. A lasted skate boot as defined in claim 20, wherein said layer of thermoformed foam is a first layer, said outer shell further comprising a second layer formed

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from fibers selected from the group consisting of carbon, kevlar, nylon, cotton, polycotton, acetate, acrylic and polyester fibers.

22. A lasted skate boot as defined in claim 21, wherein said skate boot further  
5 comprises an inner lining mounted inside said outer shell, said inner lining  
being less rigid than said outer shell and comprising inner and outer surfaces,  
said inner surface being adapted to contact the foot in use and said outer  
surface being affixed to said first layer of said outer shell.
- 10 23. A lasted skate boot as defined in claim 22, wherein said outer shell further  
comprises a third layer, said third layer being a film of polyurethane applied to  
said second layer.
24. A lasted skate boot as defined in claim 23, wherein said outer shell comprises  
15 an inner surface and an outer surface, and wherein said third layer forms part  
of said outer surface.
25. A lasted skate boot as defined in claim 24, wherein said inner lining comprises  
a layer of polyester laminated with a layer of foam.
- 20 26. A lasted skate boot as defined in claim 25, wherein said skate boot comprises  
an outsole affixed to said insole.
27. A lasted skate boot as defined in claim 26, wherein said skate boot comprises  
25 a tongue affixed to said toe cap, said tongue extending upwardly and  
rearwardly from said toe cap.
28. A lasted footwear as defined in claim 1, wherein said thermoformed foam is  
selected from the group consisting of ethylene vinyl acetate (EVA) foam,  
30 polyethylene foam, polystyrene foam and polypropylene foam.

29. A lasted skate boot as defined in claim 10, wherein said thermoformed foam is selected from the group consisting of ethylene vinyl acetate (EVA) foam, polyethylene foam, polystyrene foam and polypropylene foam.
- 5 30. An ice skate comprising the lasted skate boot defined in claim 10.
31. An inline roller skate comprising the lasted skate boot defined in claim 10.
32. A method of making a lasted skate boot for enclosing a human foot, the foot  
10 having a heel, an ankle, medial and lateral sides, a plantar surface and toes, said method comprising:
- (a) selecting a layer of thermoformable foam having first and second opposite surfaces;
  - 15 (b) heat treating at least one of said first and second opposite surfaces of said layer of thermoformable foam; and
  - (c) thermoforming said layer of thermoformable foam for constructing an outer shell having a foot-receiving cavity with a three-dimensional geometry that conforms to the heel, ankle and medial and lateral sides  
20 of the foot.
33. A method of making a lasted skate boot as defined in claim 32 further comprising assembling an insole to said outer shell, said insole facing the plantar surface of the foot.
- 25 34. A method of making a lasted skate boot as defined in claim 33 further comprising assembling a toe cap to said outer shell, said toe cap enclosing the toes.
- 30 35. A method of making a lasted skate boot as defined in claim 34 further comprising affixing an outsole to said insole.

36. A method of making a lasted skate boot for enclosing a human foot, the foot having a heel, an ankle, medial and lateral sides, a plantar surface and toes, said method comprising:
- 5 (a) selecting a layer of thermoformable foam having first and second opposite surfaces;
- (b) heat treating at least one of said first and second opposite surfaces of said layer of thermoformable foam;
- (c) forming a multi-layer composite sheet having said layer of thermoformable foam; and
- 10 (d) thermoforming said multi-layer composite sheet for constructing an outer shell having a foot-receiving cavity with a three-dimensional geometry that conforms to the heel, ankle and medial and lateral sides of the foot.
- 15 37. A method of making a lasted skate boot as defined in claim 36 further comprising assembling an insole to said outer shell, said insole facing the plantar surface of the foot.
- 20 38. A method of making a lasted skate boot as defined in claim 37 further comprising assembling a toe cap to said outer shell, said toe cap enclosing the toes.
- 25 39. A method of making a lasted skate boot as defined in claim 38 wherein said outer shell further comprises a lower skirt; the method further comprising: (a) positioning said outer shell over a last; and (b) folding said lower skirt over said insole and fastening said lower skirt to said insole.
- 30 40. A method of making a lasted skate boot as defined in claim 39 further comprising affixing an outsole to said insole.

41. A method of making a lasted skate boot as defined in claim 40 further comprising affixing a tongue to said toe cap, said tongue extending upwardly and rearwardly from said toe cap.